

FORM B: CALCULATION OF INDUSTRIAL WASTEWATER DISCHARGE FLOW RATE

COMPANY NAME: CITY OF VERNON

Calculation of flow rate is based on: _____ Adjusted metered water supply (Company must complete the calculations below)
(Check one) _____ Direct measurement through a Districts' approved effluent
_____ flow measurement system *
X _____ Estimate for a facility not yet in operation **

ADJUSTED METERED WATER SUPPLY CALCULATIONS (Round all figures to two decimals)

I Incoming Water

MILLION
GALLONS
PER YEAR

1. Metered Water Supply from Purveyor (Water Company).
Use most recent 12 consecutive months and attach copies of water bills. 1.80 MGY
2. ~~Reclaim~~ Water Supply from Company Well. (forecast estimate).
Attach meter or water master data for most recent 12 consecutive months. 464.53 MGY
3. Water Received in Raw Materials, or by other means.
Explain in attachments. 0.00 MGY
4. Rainwater/Groundwater Discharged to the Sewerage System.
Explain in attachments. 0.00 MGY
5. Total Incoming Water.
(Add lines 1 to 4) 466.33 MGY

II Water Losses

6. Wastewater Discharged to Stormwater Drainage System
Explain in attachments. (NPDES Permit No.) 0.00 MGY
7. Water Lost Through Evaporation and Irrigation.
(add lines a + b + c + d on back the of this form) 336.39 MGY
8. Water Lost in Products.
Explain in attachments. 0.0 MGY
9. Sanitary Flow Deduction
(from line "e" on the back of this form) 0.72 MGY
10. Total Water Losses
(add lines 6 to 9) 337.11 MGY

III Industrial Wastewater Discharged

11. Calculated Industrial Wastewater Discharged to the public sewer
(subtract line 10 from line 5) 129.22 MGY
12. Any Proposed increase (+) or decrease (-) in industrial waste-water
discharge to the public sewer? (explain in attachments) 0.00 MGY
13. Total proposed yearly industrial wastewater discharge
(add lines 11 and 12) 129.22 MGY
14. Average industrial waste water flow
(use line 13 to calculate below)

Million Gallons per Year	X	1,000,000	÷	Number of Discharge Days per Year	=	Gallons per Day
129.22	X	1,000,000	□	365	=	354,000 ¹

¹ 300,000 gallons per day (gpd) will be proposed for the permit application and connection fee. See Section 3.b.3 of the text for an explanation of this basis for calculation. This is the average daily flow rate that must be used on the application for industrial wastewater discharge. (It may be rounded to two significant figures.)

Note: The applicant must also complete the calculations on the back of this page.

* If your company currently has an **approved effluent wastewater flow measurement system**, please submit effluent totalizer readings for the last twelve months. Your company does not have to complete the rest of this form.

** The company must submit detailed information that substantiates how the flow rate was estimated.

WATER LOSSES

a. COOLING TOWER LOSSES

Tonnage	X	Hours of Operation per Year	X	Load ¹	X	1.38 ²	÷	1,000,000	=	Mil.Gal. per Year	
35,000	X	8,760	X	0.79	X	1.38	÷	1,000,000	=	334.26	
5000	X	200	X	0.79	X	1.38	÷	1,000,000	=	1.09	
									=	335.35	a

¹ Load = 0.5 to 0.8

² 1.38 = Gallons evaporated per hour per ton

b. BOILER LOSSES

Horsepower	X	Hours of Operation per Year	X	Load ³	X	%Evaporation ₄	X	3.82 ⁵	÷	1,000,000	=	Mil.Gal. per Year		
175	X	8,760	X	0.77	X	21%	X	3.82	÷	1,000,000	=	0.95		
	X		X		X		X	3.82	÷	1,000,000	=			
												=	0.95	b

³ Load = 0.50 to 0.80

⁴ %Evaporation = (100 - % condensate returned)/100

⁵ 3.82 = Gallons evaporated per hour per horsepower

c. OTHER EVAPORATIVE LOSSES

(explain in attachments - See Section 3.b.2)

Million Gallons per Year	
3.94	c

d. IRRIGATION LOSSES

Square Feet of Land Irrigated	X	18.7 ⁶	÷	1,000,000	=	Mil.Gal. per Year	
5,000	X	18.7	÷	1,000,000	=	0.09	d

⁶ 18.7 = Gallons irrigated per square foot per year

e. SANITARY FLOW DEDUCTION

No. Employees	X	Work Days per Year	X	Gallons per Employee per Day	÷	1,000,000	=	Mil.Gal. per Year		
32	X	365	X	50	÷	1,000,000	=	0.58		
11	X	260	X	50	÷	1,000,000	=	0.14		
								=	0.72	e

INCOMING WATER METERS

Please list all the accounts (or other identification) for all the meters that measure the water supplied to the facility.

Meter #	Location	Account #
Wtr1	2715 E. 50 th St.	081-2194-01-1
Reclaim Water	4950 Seville St.	To be established

Abbreviations and Conversion Factors

MGY = million gallons per year

1 cubic foot = 7.48 gallons

1 acre foot = 325,900 gallons

1 acre = 43,560 square feet

1 CCF = 748 gallons